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AUTHOR Coll, Julia; Osuna, Adelina
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ABSTRACT

A study compared the reading strategies in Spanish of three third-graders: two monolingual Spanish-speakers and one bilingual English-Spanish speaker. The Miscue Analysis Inventory was used for data analysis. Results indicated that the three readers performed below the proficient reader level, and their miscues followed similar patterns. The main characteristic found in the bilingual student's reading strategies was that his weaknesses were at the lexical level and his strength seemed to be at the syntactic level. However, in spite of lexical weaknesses, the bilingual student was able to summarize and narrate the setting, characters, and resolution of the story in a more cohesive manner than the monolingual students, confirming that his meaning construction strategies are more developed than those of the monolingual students. (MSE)

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The Use of Miscue Analysis to Investigate Reading Strategies Used by Bilingual and Monolingual Students

Julia Coll
Shawnee State University
Portsmouth, Ohio

Adelina Osuna
Universidad de Los Andes
Merida, Venezuela

Paper presented at the Annual Meeting of the National Association for Bilingual Education (18th, Miami, FL, May 9-13, 1989).

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Abstract

This study presents a comparison of reading strategies in Spanish between three 3rd graders: two monolingual Spanish speakers and one bilingual English-Spanish speaker. Miscue Analysis Inventory was the tool used to analyze the data. The results indicate that the three readers performed below the proficient reader level profile and their miscues followed similar patterns. The main characteristic found in the bilingual student's reading strategies was that his weaknesses was at the lexical level and his strength seemed to be at the syntactic level. However, in spite of the weaknesses at the lexical level, he was able to summarize and narrate the setting, characters and resolution of the story in a more conesive manner than the monolingual students. This confirms that his meaning construction strategies are more developed than the monolingual students.

The Use of Miscue Analysis to Investigate Reading Strategies used by Bilingual and Monolingual Students

The application of miscue analysis as a tool to investigate reader's oral behavior has been used in-depth by researchers in the field of reading (for example Goodman, Watson, Burke, 1987). The results of these analyses support the notion that 1. reading is a psycholinguistic process by which readers engage in sampling linguistic cues. They select some cues, based on their language experiences and produce hypotheses about the meaning. They then continue to select more cues to confirm or reject the porposed meaning. 2. There is a single underlying reading process operating in both first and second language. This hypothesis is supported in Goodman and Goodman (1978) data based on children from different nationalities and ethnic groups (Renault, 1985). 3. Miscue analysis has shown that children also use their knowledge about the graphophonic, syntactic, semantic and pragmatic components of language to extract meaning from written material (Goodman 1982). Moreover, Goodman's miscue analysis assists to describe reading behavior by examining the deviations or observed responses from expected responses which is what is termed miscue (Goodman, 1973). Then, these miscues can be categorized according to their graphophonemic, syntactic and semantic acceptability.

The purpose of this study was two-fold, first, to conduct a descriptive analysis of the reading strategies in Spanish, used by a sample of Eastern Venezuelan third graders. Second, to compare the reading strategies between Spanish monolinguals and a bilingual reader, when reading in Spanish.

The main objective of this study was to answer the following question: What is the difference in reading strategies in Spanish between a child who has interrupted schooling in Spanish for over a year when compared with two other children who did not interrupt schooling in Spanish? It was hypothesized that the reading strategies used by the bilingual student in Spanish would not vary much from the other children because he had acquired his reading skills in his native language. The hypothesis is supported by the linguistic interdependence principle.

That is, "although the surface aspects such as pronunciation, fluency, etc., of different languages are clearly separate, there is an underlying cognitive academic proficiency which is common across languages. This common underlying proficiency makes possible the transfer of cognitive/academic or literacy related skills across languages" (Cummins, 1985, p. 10).

The study is unique in the sense that it goes back to analyze the reading behavior in the student's native language and compares it with his old peers who did not

interrupt their learning in their native language. The findings in this study can be very valuable in the bilingual classroom to help teachers understand the bilingual's strategies when reading a text.

Method

Subjects

Three Eastern Venezuelan third graders served as voluntary participants. The three were native Spanish speakers and had well developed reading skills in that language. However, one child (Frankie) moved to the United States seventeen months prior to the collection of the data. He continued second grade in a private monolingual English school. Before that time, his only experience in English language schooling was one year of preschool at the age of three.

Materials

The selection the children read was a Venezuelan folktale entitled "La Piedra del Zamuro" (The Vulture's Stone). This selection had 1035 words and was prepared according to the guidelines of the Reading Miscue Inventory (Goodman, Burke, Watson, 1987). The guidelines suggest to prepare a typescript of the text. This typescript is used by the investigator to follow along as students read, also to record miscues and other verbal and nonverbal actions.

Instrument

Procedure One of the miscue analysis inventory

(Goodman, Burke, Watson, 1987) was the tool used to analyze the oral reading of the participants. This procedure was selected because it is the most comprehensive and provides the greatest insight into the reading process. It reveals the strategies used in monitoring a text in ways that are not as apparent in the other procedures. Contrary to procedures two, three and four, in this procedure, each miscue is analyzed separately in relation to other miscues, that allows us to observe the prediction and correction strategies that readers use in relation to each miscue. This instrument provides the researcher with questions as well as coding and data analysis forms which are needed to organize the data under study. The reader profile that results from this procedure enables the teacher or researcher to develop strategy lessons to strengthen the students' reading process. Also part of procedure one is the retelling after oral reading is completed. This adds information about the reader's search for meaning and allows for explanation about many of the reader's miscues. With all that information, we are able to define the reader's profile which indicates the student's use of various reading strategies and the students' patterns of reading strength and weakness. In addition, it reveals to us the transactions the readers engage in to interpret and respond to the text.

Procedures

The participants were presented with the story individually. The instructions given to the children were: "Please, read the selection aloud. After you finish, you will tell me in your own words all that you remember about the story." A typescript of the story was used to follow along as children read, as well as to record miscues. The reading and the children's retelling were recorded for later analysis. The reading as well as the children's retelling were recorded for later analysis. After, the children were then asked probing questions to enrich their comprehension data, for example: "Tell me more, which part did you like the best?," "Was there some part of the story that made you feel sad, happy nervous?" "Would you do the same thing?" etc. These questions and answers were also recorded, including time for silence, 40 to 50 seconds. This is an appropriate moment to use silence to get the readers talking again.

Once the data were collected, the next step was the coding of all the miscues recorded on the transcript, in the appropriate coding form. In the analysis of each miscue, the following questions were asked:

1. Does the miscue occur in a syntactically acceptable structure?

2. Does the miscue occur in a semantically acceptable structure?

3. Does this miscue produce a change of meaning?

4. Does the reader correct the miscue?

The answers to those questions provided us with two patterns to determine: first, if there was loss or not in the construction of meaning (answers to questions 2, 3, 4); second, if the grammatical relationships were strong or weak (answers to questions 1, 2, 4). The first pattern indicates the reader's concern to make sense of the text in relation to the expected meaning. The second, the reader's capability to produce structures that are syntactically acceptable.

Then, two more questions needed to be answered in relation to the graphic and sound similarities. Those were:

1. Is the miscue graphically similar to the text? 2. Is the sound of the miscue similar to the text? This information was tabulated and quantified. The retelling then, was transcribed and quantified for character analysis and development.

Results

The following analysis is the result of manual and computer procedures as presented by the miscue inventory. A clearer interpretation of these results will be presented in a comparative table along with the proficient profile results. (P= proficient reader, F= Frankie, O= Osana, R= Ramirito).

Insert Table 1 about here

The above data suggests that none of the informants are proficient readers based on the proficient reader level profile. Ramirito achieved 74 percent in meaning construction which places him at the highest level (Frankie 64 percent, Osana 58 percent). On the other hand, there is a slight variation in the percentages of the high grammatical relationships. Frankie reached 39 percent, Ramirito 41 percent and Osana 40 percent.

Finally, we observed that graphic similarities were above the proficient reader level in Osana and Frankie's reader profiles and Ramirito was below that level (73 percent). In sound similarities, Osana reached a level of 100 percent, with 78 percent for the proficient level, while Frankie and Ramirito were below the proficient level (64 and 73 percent respectively).

Discussion

The results of the analyses seem to indicate that the three children are 'natural users of their language'. That is, they are using their syntactic, semantic and graphophonic systems when processing the written page. However, they need to expand and enhance all these processes in order to become proficient readers in Spanish.

In spite of Frankie's low 64 percent in meaning

construction, he was reading with a more natural rhythm than the other two readers and his miscues are grouped within the lexical component. A good example of the latter is the word "tapara" 'container' which he stressed in the first syllable as "tápara" throughout (lines 099, 109, 111, 113, 114). In line 050 he substituted "picacho" 'pick' for "pinacho" which can be considered a dialect form. The two words are synonyms, however "picacho" is used in written language, while "pinacho" is used more commonly in oral communication among speakers of that region.

Another interesting miscue is the gender change from male to female when refering to the word "pauji" (an indigenous term for a wild animal), and the substitute of "sabroso" 'tasty' for "sabrosa" (line 138). Like the other children, he also produced the tense verb changes in "contó" 'counted' for "conto" (resulting in a nonword line 053), "mandé" 'ordered' for "mande" (line 059), "miró" 'looked' for "miro" 'look' (line 105), "ordenaba" 'used to order' for "ordenó" 'ordered' (line 129) "pasó" 'passed' for "paso" 'I pass' (line 136), and "persiguió" 'chased' for "persigue" 'chase' (line 170).

In line 074, he inserted the article "la" 'the' which discriminates the snake "la sabanera" from other types of snakes giving it a particular characterization. In line 075, he substitutted "de" for "del" 'his,' which is the contracted form of preposition and article "de" + "el"

before a masculine noun, in this case "tigre" 'tiger.' This is a good miscue example in which the reader constructs meaning instead of reading letter by letter, syllable by syllable and word by word.

In line 077, he substituted "lo" 'it' for "yo" 'I.' This substitution is correct with what happened previously, but not with the following noun phrase. At the syntactic level however, he substituted on line 077 "un" 'a, an' for "el" 'the' which makes more sense with the previous miscue in the sentence and the story.

Ramirito's profile suggests that he is a slow and careful reader. In line 005, he substituted the word "matas" for "plantas" 'plants.' This miscue involved the substitution of an informal word "matas" for a more formal one "plantas" with the meaning remaining the same. This miscue shows us his participation in maintaining meaning during the reading process. In line 009, he substituted the simple present continous verbal form "brincando" for the past tense of the same verb. The change involves a tense verb transformation from a present progressive verb into a simple past tense. In spite of this syntactic transformation, this gave a new dimension to the action involved in the narrative and by the same token, it maintained the meaning according to the sentence and the whole story in spite of the syntactic transformation.

He produced a very interesting miscue (line (012),

using an antonym for the action of the verb involved according to the noun phrase used prior to the miscue: "el corazón se le agitaba" for "el corazón se le aquietaba" 'his heart was beating' for 'his heart was calming down.' He maintained the tense verbal suffix although the meaning was totally disrupted. In line 023, the miscue "así" for "ah, si" involves an intonation shift which results in a change from 'this way' to 'oh, yes' thereby losing the sarcasm of the character in his dialogue. In line 033, we observed the substitution "de la piedra" 'of the stone' for "las piedras" 'the stones.' This shows his use of the plural form and gender according to the Spanish language rules of pluralization between nouns and adjectives categories. This is a good example of his knowledge of the Spanish language and its grammar. In line 042, Ramirito substitutes the present progressive form of the verb "volando" 'flying' for the infinitive form "volar" 'to fly,' giving it a more static action in which the character is involved. Interestingly enough, in line 046 he does the opposite where he substituted the simple present tense for the progressive form of "corriendo" 'running' because the preceding verb had the same verbal pattern. We also observed many article insertions to form noun phrases which are more common in the written form. This can be a clue that even though he is a slow and careful reader, he is very familiar with written language.

Osana did not have any miscues in the first one hundred words of the reading because she also read very carefully. Subsequently, however, there were several tense changes in her miscues. For example in line 072, she substituted the past tense of the verb for the present tense "buscó" 'looked for' for "busco" 'look for,' this same miscue was produced by Ramirito. In spite of the change, there is a minimal amount of meaning loss. The same thing happens in line 074 where she substitutes "llaman" 'call' for "llamaban" 'used to call' present for past. These two changes occur in the same paragraph where she kept the tenses the same. She maintained the same verb tense in which the actions occured according to the meaning of the sentence and consistent with the whole story. In line 165, she substituted the present of the verb "estar" 'to be' for the imperfect past. In line 170 the same thing occurs in that she substitutes "toca" 'touch' for "tocaba" 'used to touch.' We see that the verbal miscue substitutes present for imperfect past. This seems to indicate that she was consistent throughout the entire text in her tense substitution. The verbal changes between the three students rerlect a tendency to accept actions in the past and not in the continous form.

In looking at the three readers, it is evident that their miscues followed similar patterns in verb substitutions. One noticeable difference between Frankie

and the other two students is that his weakness is at the lexical level and his strength seems to be at the syntactic level. This can be explained by the fact that because he was in the United States, he has not had the same opportunities to develop his vocabulary in Spanish as the other two children.

Once the oral reading is analyzed and quantified, the retelling information is quantified. This retelling score is one measure of comprehension. To quantify the retelling information, we used the global retelling guide in Procedure 1. This procedure suggests to assign points which can be distributed into 40 points for the analysis of the characters in the story, and 60 points for events. That distribution depends on the passage and the purpose of the retelling score. For the purpose of this investigation, the following points were assigned: 60 for the retelling of the events, and 20 each for the plot and theme.

Osana's retelling was very limited. Even with much probing, she gave little information about the story. It seems that once she finished reading, she felt that she had done her duty. Her limited retelling suggests that she has not had very much experience with this type of activity. Her total score of eleven points indicates the small quantitative information given in her retelling.

Along with the retelling, miscue analysis provides us

with additional information which allows us to conclude that Osana is overrelying on the graphophonic cuing system. As a result she is less efective in using her strategies in order to preserve meaning. Her percentage for sound similarity relationships was 100 percent and the percentage for graphic similarity relationships was 91 percent. The percentages are above the percentages established for the proficient reader. On the other hand, her percentage of 57 percent on meaning construction is moderately below the suggested percentages for the proficient reader. These figures seem to indicate that Osana is more concerned with accurate oral production rather than meaning construction.

Ramirito was able to provide a nice summary of the story in which he talked about the plot and theme of the book. His score was 44.5. This confirms the percentages obtained in the miscue analysis which was 74 percent in meaning construction. The percentage is close to the proficient reader's profile. Ramirito was not overrelying on the graphophonic cuing system. His scores of 61 percent of graphic similarities and 62 percent are even with those of the proficient reader.

Frankie obtained a total score or 59 in his retelling. This figure is consistent with the percentage obtained in meaning construction which was 64 percent. By the same token, in spite of obtaining lower scores, Frankie was able to summarize and narrate the setting, character and

resolution of the story in a more cohesive way.

Suggested Strategies

This analysis along with the analysis of the retelling allowed us to make the following reading strategy suggestions: To help the readers develop abilities that will enable them to construct meaning of what they are reading, a variety of interesting reading materials is recommended, especially children's literature. The students should have the opportunity to be involved in choosing some of the materials. When students are given the opportunity to choose, they then have the opportunity to develop a feeling of control and success in their own reading.

Before the students read the text, it is beneficial for them to have an opportunity to discuss what they think the story is going to be about. In this way the children will be thinking about what is going to happen in the story instead of being overly concerned with recoding. A variety of reading materials give the students the opportunity to become familiar with different genres. The students can then become more involved in choosing reading materials that are interesting to them. After the reading experience, the readers should be encouraged to discuss their impressions and understanding of what they read. This is especially important for the children in this study who showed the difficulty they had with retelling.

The most important aspect of the reading activities in order for the children to discover that the goal of reading is the construction of meaning, is the discussion of what they have read. An environment in which the students feel confortable about discussing the understanding of what they have read should be created. Throughout these discussions, the readers can begin to realize that different people understand different aspects of the same reading and that different interpretations are valid.

The children in this study have been too concerned with reading as a performance for the adult, who represents the authority, which in this case is the teacher. They have not realized that reading is for them to get something out of the text for various purposes.

Another helpful strategy is a reading response journal. In this type or journal the students write their reactions to what they have read. This is another form of retelling and at the same time, it allows them to think about their own understanding of the story. Writing gives them the opportunity to use all the cuing systems of language, especially the semantic system because what they write will have to make sense to them and to the people they share their journals with. These journals can provide an interesting way to begin discussing what the students have read and to summarize the ideas expressed in the story.

Another strategy that will help students is predicting, sampling and confirming. The students read different sections of the story that has been cut up. The students will then discuss how they think the story is organized. The important aspect of this strategy is to have the students engage in discussion in which they can share their background knowledge and understanding of what they have read.

To summarize, what has been presented above demonstrates that the miscue analysis inventory is a powerful tool when the need to reevaluate students in the classroom arises. In addition, this tool illuminates the teacher in the student's reading process to assist them to become proficient readers.

The main research question of this study was: What is the difference between a reader who has interrupted schooling in Spanish for over a year when compared with two other readers who did not interrupt their schooling? This research shows that there is in fact a difference at the lexical level. The assertion is based on the type of miscues produced which seems to indicate that the lexical items are no longer active in the student's repertoire. It could also be speculated that the child did not have the experience with that type of vocabulary prior to the time of the data collection. At the syntactic level, his grammatical patterns seem to be very well established since

there were no sintactic influence from English to Spanish indicated. The findings in this investigation show that Procedure One of the Reading Miscue Analysis Inventory, allows quantification of data and permits qualification of information related to the interaction that takes place between the reader and the text.

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Table 1

	P	F	D	R
Meaning Construction				
No loss	70%	36%	42%	44%
Partial loss	19%	28%	16%	30%
Loss	11%	36%	41%	25%
Grammatical Relationships				
Strength	61%	32%	40%	41%
Partial Strength	20%	01%	0	1%
Overcorrection	3%	27%	20%	4%
Weakness	16%	32%	40%	52%
Graphic Similarities				
High	62%	83%	89%	61%
Some	17%	01%	0	12%
None	21%	15%	10%	25%
Sound Similarities				
High	62%	64%	100%	62%
Some	16%	01%	0	11%
None	22%	34%	0	25%